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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,257	02/27/2004	Christian Joachim Keidel	8674.004.US0000	1296

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Novak Druce + Quigg, LLP  
1300 Eye Street, NW, Suite 1000  
Suite 1000, West Tower  
Washington, DC 20005

EXAMINER
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OMGBA, ESSAMA

ART UNIT	PAPER NUMBER
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3726

MAIL DATE	DELIVERY MODE
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08/06/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/787,257	<b>Applicant(s)</b> KEIDEL ET AL.	
	<b>Examiner</b> Essama Omgba	<b>Art Unit</b> 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,6,7,10,13-16,18,19,23-25,29,32 and 35-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6,7,10,13-16,18,19,23-25,29,32 and 35-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/20/2008</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 6, 7, 10, 13-16, 18, 19, 23-25, 28, 29, 32 and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Bruner et al. (US Patent 3,568,491), Liu et al. (US Patent 5,108,520), Chakrabarti et al. (US 2002/0150498) and Bryans et al. (US Patent 6,973,815).

With regards to claims 1, 6, 7, 10, 13, 14, 18, 28, 29 and 32, Applicant, at pages 1-3 of the specification to be known as AAPA, discloses a method for producing an integrated monolithic aluminum structure for a part of a wing skin or frame structure for an aircraft wherein an aluminum alloy plate with a thickness in the range of 15 to 75 mm is bent to form a predetermined shaped and after the bending operation, machining the plate to produce the monolithic structure. AAPA does not disclose heat-treating the shaped structure comprising artificially ageing the shaped structure to a T6, T79, T78, T77, T76, T74, T73 or T8 temper prior to machining. However Bruner et al. teaches producing integrated monolithic aluminum structure by providing a AA7xxx-series aluminum alloy plate with a predetermined thickness (col. 3, lines 1-5), shaping the alloy plate to obtained a predetermined shaped structure wherein shaping comprises cold forming (col. 3, lines 54-75 and col. 4, line 1), heat-treating the shaped structure to artificially age the shaped structure and machining the shaped structure (col. 4, lines 28-38). Therefore it would have been obvious to

one of ordinary skill in the art at the time the invention was made, to have produced the monolithic structure of AAPA, in the manner taught by Bruner et al., in order to avoid distortion resulting from the bending and machining and the internal residual stress. Regarding the recitation of the composition of the AA7xxx-series aluminum alloy, Applicant should note that the 7xxx-series of aluminum alloys has in general such composition as attested by Liu et al., see column 3, lines 16-52. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used an aluminum alloy with the claimed composition since it has been held that "a prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a prima facie case of obviousness." *In re Peterson*, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003), see MPEP § 2144.05. Regarding the recitation of artificially aging the shaped structure to a T6, T79, T78, T77, T76, T74, T73 or T8 temper condition, Applicant should note that it is typical to artificially age such aluminum alloys to such temper condition to achieve the desired benefits such as peak strength T6-type over-aged T7-type tempers. It is well known to those skilled in the art that for a given 7xxx-series alloy, the peak strength T6-type temper provides the highest strength combined with the lowest fracture toughness and corrosion resistance while the most over-aged temper such as T73-type temper for the same alloy provides the highest fracture toughness and corrosion resistance combined with the lowest strength. An appropriate temper is generally chosen somewhere between these two extremes to suit a particular application, see paragraph [0009] of Chakrabarti et al.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have artificially aged the shaped structure of AAPA/Bruner et al./Liu et al. to such tempers, as disclosed by Chakrabarti et al. to achieve desired benefits. Regarding the recitation "wherein said cold forming comprises bending to form the shaped structure having a built-in radius", Applicant should note that it is known to form aeronautical members by cold forming an alloy plate by bending in order to form a shaped structure with a built-in radius as attested by Bryans et al., see column 4, lines 13-17 and 31-33 and column 6, lines 59-67 and column 7, lines 1-11. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have cold formed the aeronautical member of AAPA/Bruner et al./Liu et al./Chakrabarti et al., in light of the teachings of Bryans et al., as is known in the art.

For claims 15 and 16, Applicant should note that the method disclosed by AAPA/Bruner et al./Liu et al./Chakrabarti et al. would bring the distortion to an acceptable value.

For claims 19 and 23-25, see column 2, lines 21-29 of Bruner et al. Regarding the recitation of the particular distortion target of less than 0.13 mm, Applicant should note that it is within the general knowledge of one of ordinary skill in the art to set acceptable working parameters for the desired final product, and in as much as the claimed method and product are obvious over AAPA/Bruner et al./Liu et al. as shown above, it would have been obvious to one of ordinary skill in the art that the

claimed longitudinal distortion and lack of differing inner stress levels would be achieved by the method of AAPA/Bruner et al./Liu et al.

Regarding claims 35-37, see column 1, lines 14-22 and 45-47 and column 2, lines 37-44 of Bryans et al.

Regarding claim 38, see column 4, lines 28-38 of Bruner et al.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1, 6, 7, 10, 13-16, 18, 19, 23-25, 29 and 32 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (571) 272-4532. The examiner can normally be reached on M-F 9-6:30, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Essama Omgba/  
Primary Examiner, Art Unit 3726

eo  
August 1, 2008

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